



**Florida Municipal Power Agency  
ARP Alternative Fixed Cost Allocators –  
Demand Rate Alternatives Workshop**

**February 11, 2014**

**12:30 p.m.**

**Executive Committee**

Howard McKinnon, Havana - Chairman

Matt Brower, Ocala - Vice Chairman

Bruce Hickle, Bushnell

Jimmy Pittman, Clewiston

Jackie Cannon, Fort Meade

Bill Thiess, Fort Pierce

Ray Braly, Green Cove Springs

Roy Trotter, Jacksonville Beach

Lynne Tejeda, Key West

Larry Mattern, Kissimmee

Paul Kalv, Leesburg

Bill Conrad, Newberry

Marc Oody, Starke

**Workshop Held 12:30 p.m.  
Tuesday, February 11, 2014  
Florida Municipal Power Agency  
8553 Commodity Circle  
Orlando, FL 32819  
407-355-7767**



Florida Municipal Power Agency

Nicholas P. Guarriello  
General Manager and CEO

**TO:** FMPA Executive Committee

**FROM:** Nicholas P. Guarriello

**DATE:** February 6, 2014

**RE:** ARP Alternative Fixed Cost Allocators – Demand Rate Alternatives Workshop  
Tuesday, February 11, 2014 at 12:30PM

**PLACE:** Florida Municipal Power Agency,  
8553 Commodity Circle, Orlando, FL  
Board Room, Orlando, Florida

**DIAL-IN INFORMATION: 866-411-8247 or 321-239-1100;  
ACCESS CODE 91583#**

**(If you have trouble connecting via phone or internet, please call 407-355-7767)**

Chairman Howard McKinnon, Presiding

## AGENDA

1. Call to Order, Roll Call
2. Information Item:
  - a. Introduction (Nick Guarriello)
  - b. Alternative Fixed Cost Allocators – Demand Rate Alternatives Discussion (Mark Larson/Nick Guarriello)
3. Member Comments
4. Adjournment

One or more participants in the above referenced public meeting may participate by telephone. At the above location there will be a speaker telephone so that any interested person can attend this public meeting and be fully informed of the discussions taking place either in person or by telephone communication. If anyone chooses to appeal any decision that may be made at this public meeting, such person will need a record of the proceedings and should accordingly ensure that a verbatim record of the proceedings is made, which includes the oral statements and evidence upon which such appeal is based. This public meeting may be continued to a date and time certain, which will be announced at the meeting. Any person requiring a special accommodation to participate in this public meeting because of a disability, should contact FMPA at (407) 355-7767 or 1-(888)-774-7606, at least two (2) business days in advance to make appropriate arrangements.

**AGENDA ITEM 1 – CALL TO ORDER,  
ROLL CALL**

**Executive Committee  
February 11, 2014**

# **VERBAL REPORT**

## **AGENDA ITEM 2 – INFORMATION ITEMS**

### **a) Introduction**

**Executive Committee  
February 11, 2014**

**AGENDA ITEM 2 – INFORMATION ITEMS**

- b) Alternative Fixed Cost Allocators – Demand Rate Alternatives Discussion**

**Executive Committee  
February 11, 2014**



Florida Municipal Power Agency

## AGENDA PACKAGE MEMORANDUM

TO: FMPA Executive Committee  
FROM: Jim Arntz  
DATE: February 7, 2014  
ITEM: 2b – Alternative Fixed Cost Allocators - Demand Rate Alternatives Discussion

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**Introduction** During the January Executive Committee (EC) Meeting, while discussing EC Agenda item 10b, Alternative Fixed Cost Allocators - Demand Rate Alternatives, the EC requested that staff schedule a workshop for additional discussion and provide information on active and considered peak shaving activities of the All-Requirements Project (ARP) Participants. This agenda material is provided pursuant to this request.

**Discussion** Staff developed two information requests; one for Participants currently peak shaving and another for those Participants who have indicated they are currently considering alternatives for peak shaving within their local electric system. These two separate requests, as shown below, were emailed on Friday, January 24, 2014.

**Email request to Participants currently peak shaving:**

1. What efforts have you made and what costs have you incurred in your efforts to reduce your coincident peak demand? Please provide a reasonable (not granular) level of detail to help us make sure we understand what and how much was spent.
2. What financial commitments have already been made and would result in a cost to cancel or mitigate if your peak shaving efforts were suspended? Please provide the contract(s) associated with these commitments.
3. Other than what you itemized in your answer to #2 above, what costs will you incur in the future, based on actions already set into motion by you.
4. What operating (non-capital) costs do you incur related to the peak shaving efforts? Please provide a reasonable (not granular) level of detail by year.

5. Please provide us with anything else you believe is relevant but has not been requested or asked.

**Email request to Participants considering peak shaving:**

What are you planning (reasonable level of detail, but not granular) for future peak shaving efforts – estimated peak reduction in MWs and cost. If it is a multi-year or multi-step process, please note the timing and triggering event(s). Of course, if there is anything else that you believe we should know about your plan, please forward.

**The Participants currently peak shaving and sent a request for information were as follows:**

1. Leesburg
2. Beaches Energy
3. Ft. Pierce
4. Ft. Meade

**The Participants currently considering peak shaving and sent a request for information were as follows:**

1. Ocala
2. Newberry

**The four ARP Participants' active peak shaving programs are described briefly below:**

**Leesburg** – has the largest peak shaving program which includes utilization of voltage reduction, city owned generation and customer owned generation. They are currently able to reduce their peak by up to 11.1 MW.

**Beaches Energy** – has a program that utilizes voltage reduction, city owned and customer owned generation. They are currently able to reduce their peak by up to 5.2 MW.

**Fort Pierce** – has a program that has mainly utilized voltage reduction, although they have used some city owned generation in previous years. They are considering expanding their efforts by utilizing both additional city and customer owned generation. During FYE 2013 they were able to reduce their peak by up to 2.1 MW but only implemented peak shaving during five of the coincident peaks.

**Fort Meade** – started their program during FYE 2013. They currently have 1000 KW of city owned generation available and implemented peak shaving during six of the coincident peaks. They are currently planning to connect an additional 1MW generator.

Currently, two other ARP participants are actively considering implementing peak shaving programs:

**Ocala** – is planning to utilize 4.5 MW of city owned generation as its first peak shaving installation.

**Newberry** – is evaluating peak shaving alternative information at this time.

**Attachment 1 - Peak Shaving Cost Shift Summary.** In December 2013, staff presented an analysis of the demand cost shift that occurred in FYE 2013 between members due to the peak shaving activities of the four participants currently operating peak shaving programs. Attachment 1 is a schedule of estimated demand cost shift due to peak shaving activities from FYE 2009 through December 2013. For FYE 2011 through FYE 2012 the estimate is based on the same methodology used for the previous analysis for FYE 2013. Since peak shaving activities have only been reported to the ARP since December of 2010, FYE 2011 only includes 10 months of activity. Activity prior to December 2010 was provided by Leesburg and is included in the schedule at the values they provided.

**Attachment 2 - Reported Costs for Participant Peak Shaving Activities.** Staff summary of capital and operating costs reported to us by each of the participants with active peak shaving programs.

**Attachment 3 - Reported Estimated Future Capital Costs.** Staff summary of the future capital costs being considered for new or expanded peak shaving measures as reported by the participants.

**Attachment 4** - Copies of the information submitted by the ARP participants in answer to the peak shaving activities information requests sent to them.

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Recommended  
Action: For information only, no action requested.

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Attachments



**Attachment 1**  
**All-Requirements Project - Demand Cost Shift due to Peak Shaving Activities**

ARP Participant	Prior to Dec 2010 (1)	Dec 1, 2010 thru FYE 2011	FYE 2012	FYE 2013	FY 2014 thru Dec 31, 2013	Total
Bushnell		\$ 12,476	\$ 14,314	\$ 20,264	\$ 3,982	\$ 51,036
Clewiston		43,531	52,106	61,910	17,117	174,664
<b>Fort Meade</b>		21,991	25,244	(84,145)	7,440	(29,470)
<b>Fort Pierce</b>		(103,858)	(157,795)	75,369	23,310	(162,974)
Green Cove Springs		55,577	63,763	92,586	16,701	228,627
Havana		12,490	13,650	20,615	3,607	50,362
<b>Beaches Energy</b>		(379,355)	(645,275)	(768,561)	(96,032)	(1,889,223)
Keys Energy Services		262,758	347,564	442,241	127,485	1,180,048
Kissimmee Utility Authority		552,683	677,026	930,698	220,831	2,381,238
Lake Worth Utilities		127,310	158,430	209,575	58,449	553,764
<b>Leesburg</b>	(1,898,566)	(1,236,462)	(1,306,860)	(2,058,825)	(609,653)	(7,110,366)
Ocala		589,256	710,605	991,403	206,696	2,497,960
Starke		30,613	35,707	50,402	9,447	126,169
Newberry		16,453	19,336	28,867	5,320	69,976
<b>Total (2)</b>	<b>\$ (1,898,566)</b>	<b>\$ 5,463</b>	<b>\$ 7,815</b>	<b>\$ 12,399</b>	<b>\$ (5,300)</b>	<b>\$ (1,878,189)</b>

(1) Based on information from Leesburg covering a time period prior to FMPA maintaining member reported peak shaving activities. Therefore, staff is not comfortable calculating an estimate of the demand cost shift, using the methodology used with all other periods noted in this table.

(2) Totals under a "cost shift" might normally be expected to equal zero, however rounding with the large numbers involved produces these relatively small numbers. (rate calculated in whole MWs and billing based on kW) The large total dollar figure is a reflection of Note (1).

**Attachment 2**  
**All-Requirements Project - Participants' Peak Shaving Program Costs**

ARP Participant	Capital	Environmental	City Department Reimbursements	Generator Maintenance	Fuel Monitoring	Share the Savings	Total
Bushnell							0
Clewiston							0
<b>Fort Meade</b>	\$ 331,742	\$ 43,174	\$ -	\$ 3,000	\$ 6,000	\$ -	\$ 383,916
<b>Fort Pierce (1)</b>	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Green Cove Springs							0
Havana							0
<b>Beaches Energy</b>	\$ 770,000	\$ -	\$ -	\$ -	\$ 186,000	\$ -	\$ 956,000
Keys Energy Services							0
Kissimmee Utility Authority							0
Lake Worth Utilities							0
<b>Leesburg</b>	\$ 2,603,332	\$ 140,087	\$ 455,187	\$ 179,038	\$ -	\$ 1,479,646	\$ 4,857,290
Ocala							0
Starke							0
Newberry							0
<b>Total</b>	<b>\$ 3,705,074</b>	<b>\$ 183,261</b>	<b>\$ 455,187</b>	<b>\$ 182,038</b>	<b>\$ 192,000</b>	<b>\$ 1,479,646</b>	<b>\$ 6,197,206</b>

(1) No cost data provided by Fort Pierce.

### Attachment 3

#### Future Additional Peak Shaving Program Costs

ARP Participant	Capital	Operating	Total
Bushnell			0
Clewiston			0
<b>Fort Meade (3)</b>	\$ 348,467	\$ 3,640	\$ 352,107
<b>Fort Pierce (4)</b>	\$ 150,000	\$ -	\$ 150,000
Green Cove Springs			0
Havana			0
<b>Beaches Energy</b>			0
Keys Energy Services			0
Kissimmee Utility Authority			0
Lake Worth Utilities			0
<b>Leesburg</b>			0
<b>Ocala (1)</b>	\$ 852,000	\$ 209,000	\$ 1,061,000
Starke			0
<b>Newberry (2)</b>			0
<b>Total</b>	<b>\$ 1,350,467</b>	<b>\$ 212,640</b>	<b>\$ 1,563,107</b>

- (1) Ocala considering placing 3 diesel generators, totaling 4.5 MWs, into a peak shaving effort.
- (2) Newberry is evaluating peak shaving program alternatives. No estimates currently available as no preferred approach decision made of as this date.
- (3) An additional 1 MW generator currently being set up. Not yet operational.
- (4) Feasibility of deploying an existing 850 kW diesel generator currently being evaluated. Dollar estimate ranges from \$70k to \$150k. \$150k used above.

Attachment 4A  
Leesburg Data Request Response

CITY OF LEESBURG - ELECTRIC DSM INFORMATION

INITIAL CAPITAL COSTS

DSM GENERATORS (CITY OWNED) - COST TO CHANGE OUT TRANSFER SWITCHES, INSTALL COMMUNICATIONS, AND OTHER CITY OWNER GENERATOR EXPENSES = \$2,603,332.55  
 DSM PUBLIC SOURCE - COST TO CHANGE OUT TRANSFER SWITCHES, INSTALL COMMUNICATIONS, AND OTHER CUSTOMER OWNED GENERATOR EXPENSES = \$0.00

- NOTES: 1. CITY OWNED GENERATORS (9) = MAIN WATER PLANT (1), CANAL STREET WATER PLANT (2), TURNPIKE WATER PLANT (1), MALL WATER TOWER (1), FLEET (1), LEESBURG POLICE DEPT (1), CITY HALL (1), ELECTRIC MOC (1)  
 2. PUBLIC SOURCE (5) = PUBLIX (2), WALMART (1), LEESBURG REGIONAL MEDICAL CENTER (2)  
 3. ALL CITY OWNED EXPENSES PAID BY ELECTRIC DEPARTMENT  
 4. ALL PUBLIC SOURCE PAID FOR BY CUSTOMER, NO CITY EXPENSES

DSM GENERATORS - COST TO COMPLY WITH RICE RULES = \$140,087.24 (2013, CITY OWNED GENERATORS ONLY, PUBLIC SOURCE PAID FOR BY CUSTOMERS)

DSM REVENUES

	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	Total
DSM Voltage VAR	\$ 167,769.30	\$ 636,245.04	\$ 527,016.90	\$ 361,993.40	\$ 609,604.10	\$ 222,734.80	\$ 2,525,363.54
DSM Generators	\$ -	\$ 650,324.32	\$ 913,039.20	\$ 756,841.62	\$ 1,084,147.30	\$ 253,707.14	\$ 3,658,059.58
DSM Public Source	\$ -	\$ 444,228.00	\$ 672,404.72	\$ 473,573.92	\$ 1,103,022.40	\$ 266,063.44	\$ 2,959,292.48
	\$ 167,769.30	\$ 1,730,797.36	\$ 2,112,460.82	\$ 1,592,408.94	\$ 2,796,773.80	\$ 742,505.38	\$ 9,142,715.60

DSM EXPENSES

	FY 2009	FY 2010	FY 2011*	FY 2012	FY 2013	FY 2014**	Total	
DSM Generators	\$ -	\$ -	\$ 222,905.06	\$ 82,710.61	\$ 136,739.61	\$ 12,831.86	\$ 455,187.14	*Included catch up amounts from 2009, 2010
DSM Expenses		\$ 95,216.88	\$ 32,165.00	\$ 24,681.50	\$ 26,974.31	\$ -	\$ 179,037.69	**as of 1/28/2014 Reinbursement to other City Departments(FEMA Rate)
DSM Public Source	\$ -	\$ 222,114.00	\$ 336,202.36	\$ 236,786.96	\$ 551,511.20	\$ 133,031.72	\$ 1,479,646.24	Generator maintenance contracts, etc.
		\$ 317,330.88	\$ 591,272.42	\$ 344,179.07	\$ 715,225.12	\$ 145,863.58	\$ 2,113,871.07	50% Savings Payout
Total Savings	\$ 167,769.30	\$ 1,413,466.48	\$ 1,521,188.40	\$ 1,248,229.87	\$ 2,081,548.68	\$ 596,641.80	\$ 7,028,844.53	*Minus the capital costs of \$2,603,332.55 + \$140,087.24 = \$4,285,179.43

- NOTES: There are some other smaller miscellaneous expenses that are still being identified.  
 There are some unknown expenses such as reduced generator life, increased generator maintenance, increased tap changer maintenance, and lost revenue due to reduced sales during voltage reduction

The responses above reflect any additional discussions or updating with participant.

**Attachment 4B**  
**Beaches Energy Data Request Response**

**From:** Roy Trotter  
**Sent:** Tuesday, January 28, 2014 2:40 PM  
**To:** 'Mark Larson'  
**Subject:** RE: Data request - following up on yesterday's EC meeting discussion of peak shaving and program costs

Mark,

We have \$565k invested in distributed generation (switchgear and emissions equipment to satisfy RICE). Annual O&M maintenance is \$6k, monitoring services is \$14k. RT

**From:** Roy Trotter  
**Sent:** Tuesday, January 28, 2014 2:45 PM  
**To:** Mark Larson <[Mark.Larson@fmpa.com](mailto:Mark.Larson@fmpa.com)> ([Mark.Larson@fmpa.com](mailto:Mark.Larson@fmpa.com))  
**Subject:** RE: Data request - following up on yesterday's EC meeting discussion of peak shaving and program costs

We estimated a balance of \$205k remains outstanding

**From:** Roy Trotter  
**Sent:** Tuesday, January 28, 2014 2:54 PM  
**To:** Mark Larson  
**Subject:** RE: Data request - following up on yesterday's EC meeting discussion of peak shaving and program costs

The monthly fuel charge is approximately \$3500.

**Attachment 4C**  
**Fort Pierce Utility Authority Data Request Response**

**From:** Bill Baldwin  
**Sent:** Wednesday, January 29, 2014 8:40 AM  
**To:** [Mark.Larson@fmpa.com](mailto:Mark.Larson@fmpa.com)  
**Cc:** Bill Thiess  
**Subject:** RE: Data request - following up on yesterday's EC meeting discussion of peak shaving and program costs

Mark,

FPUA's peak shaving efforts have been minimal and are considered as a defensive measure in response to peak shaving efforts by sister utilities in the ARP.

1. What efforts have you made and what costs have you incurred in your efforts to reduce your coincident peak demand? Please provide a reasonable (not granular) level of detail to help us make sure we understand what and how much was spent.
  - a. FPUA's efforts to reduce the coincident peak demand have been focused on three areas.
    - i. Using standby and emergency generators as needed (scheduling of "maintenance and testing").
    - ii. A 2.5% voltage reduction through SCADA control of distribution feeder regulators.
    - iii. Intentionally schedule processes at our water and wastewater plants to avoid using electricity during predicted coincident peak hours.
  - b. FPUA is currently completing an analysis to determine the feasibility of using a 850 kW diesel emergency generator at our main wastewater lift station. This could provide an additional reduction in coincident peak.
  - c. Cost have been minimal due to expertise in ITS and operations.
2. What financial commitments have already been made and would result in a cost to cancel or mitigate if your peak shaving efforts were suspended? Please provide the contract(s) associated with these commitments. **None at this time.**
3. Other than what you itemized in your answer to #2 above, what costs will you incur in the future, based on actions already set into motion by you.
  - d. Item 1b will incur some minor cost to enable the use of the emergency generator for reducing the coincident peak. The construction cost range from \$70K to \$150K to interconnect the generator to the grid.
4. What operating (non-capital) costs do you incur related to the peak shaving efforts? Please provide a reasonable (not granular) level of detail by year.
  - e. Operating cost is minimal due remote control of regulators for voltage reduction and standard operating procedures for maintenance and operation of standby and emergency generator.

**Attachment 4C**  
**Fort Pierce Utility Authority Data Request Response**

- 5. Please provide us with anything else you believe is relevant but has not been requested or asked.
  
- f. Customer owned generation could be considered in the future. For example, Publix stores might be resources for shedding additional load.

Please let me know if you have questions or concerns.

**Bill Baldwin, PE**  
**Director of Electric & Gas Systems**

## Attachment 4D Fort Meade Data Request Response

City Of Fort Meade  
(Emergency Power Units)

<p>Unit (1) 500 kW Unit @ Wastewater Facility</p> <table border="0" style="width: 100%;"> <tr> <td style="padding-left: 20px;">Switch Gear</td> <td style="text-align: right;">\$129,682.00</td> </tr> <tr> <td style="padding-left: 20px;">Maintenance</td> <td style="text-align: right;">\$1,500.00</td> </tr> <tr> <td style="padding-left: 20px;">Monitoring /fuel</td> <td style="text-align: right;">\$3,000.00</td> </tr> <tr> <td style="padding-left: 20px;"><u>Rice Neshaps</u></td> <td style="text-align: right;"><u>\$25,028.00</u></td> </tr> <tr> <td style="padding-left: 20px;"><b>UNIT 1 Cost</b></td> <td style="text-align: right;"><b>\$159,210.00</b></td> </tr> </table>	Switch Gear	\$129,682.00	Maintenance	\$1,500.00	Monitoring /fuel	\$3,000.00	<u>Rice Neshaps</u>	<u>\$25,028.00</u>	<b>UNIT 1 Cost</b>	<b>\$159,210.00</b>	<p>Unit (2) 500 kW Unit Water System</p>	\$60,000.00
Switch Gear	\$129,682.00											
Maintenance	\$1,500.00											
Monitoring /fuel	\$3,000.00											
<u>Rice Neshaps</u>	<u>\$25,028.00</u>											
<b>UNIT 1 Cost</b>	<b>\$159,210.00</b>											
	Foundation Pad	\$500.00										
	Switch Gear	\$129,682.00										
	Change Order Transformer	\$11,878.00										
	Maintenance	\$1,500.00										
	Monitoring /fuel	\$3,000.00										
	<u>Rice Neshaps</u>	<u>\$18,146.00</u>										
	<b>UNIT 2 Cost</b>	<b>\$224,706.00</b>										

(Unit 2 will be relocated to Community Center)

<p>Unit (3) 1000 Kw Unit <del>System Construction</del> Maintenance Facility / Water System</p> <table border="0" style="width: 100%;"> <tr> <td style="padding-left: 20px;">Housing</td> <td style="text-align: right;">\$30,286.00</td> </tr> <tr> <td style="padding-left: 20px;">Founda</td> <td style="text-align: right;">\$8,575.00</td> </tr> <tr> <td style="padding-left: 20px;">Switch Gear</td> <td style="text-align: right;">\$262,498.00</td> </tr> <tr> <td style="padding-left: 20px;">Monitoring /fuel</td> <td style="text-align: right;">\$10,500.00</td> </tr> <tr> <td style="padding-left: 20px;">Maintenance</td> <td style="text-align: right;">\$3,640.00</td> </tr> <tr> <td style="padding-left: 20px;"><u>Rice Neshaps</u></td> <td style="text-align: right;"><u>\$36,608.00</u></td> </tr> <tr> <td style="padding-left: 20px;"><b>UNIT 3 Cost</b></td> <td style="text-align: right;"><b>\$352,107.00</b></td> </tr> </table>	Housing	\$30,286.00	Founda	\$8,575.00	Switch Gear	\$262,498.00	Monitoring /fuel	\$10,500.00	Maintenance	\$3,640.00	<u>Rice Neshaps</u>	<u>\$36,608.00</u>	<b>UNIT 3 Cost</b>	<b>\$352,107.00</b>	
Housing	\$30,286.00														
Founda	\$8,575.00														
Switch Gear	\$262,498.00														
Monitoring /fuel	\$10,500.00														
Maintenance	\$3,640.00														
<u>Rice Neshaps</u>	<u>\$36,608.00</u>														
<b>UNIT 3 Cost</b>	<b>\$352,107.00</b>														



## Attachment 4E Ocala Data Request Response

**From:** Mike Poucher [<mailto:MPoucher@Ocalafl.org>]  
**Sent:** Friday, January 24, 2014 4:27 PM  
**To:** Mark Larson  
**Cc:** Larry Novak; David Anderson; Matt Brower  
**Subject:** RE: follow up / data request re peak shaving workshop

Mark:

Ocala's plan would put a total of 4500 kw of generation from 3 diesel generators owned by the City Water and Sewer department. The initial cost to upgrade one old generator and install switchgear is \$852,000. The annual cost of fuel and monitoring services is \$209,000. If we started now, the project would be completed in August of 2014.

Please let me know if you have any questions.

**Michael Poucher, P.E.**  
*Director, Electric Utility*  
*City of Ocala Utility Services*  
*Phone 352-351-6620*



<http://www.ocalafl.org>

Attachment 4F  
Newberry Data Request Response

Per discussions with Bill Conrad, Newberry is actively pursuing development of alternatives.

**AGENDA ITEM 3– MEMBER COMMENTS**

**Executive Committee  
February 11, 2014**